2006 VISVESVARAYA TECHNOLOGICAL UNIVERSITY

B.E COMPUTER SCIENCE & ENGINEERING

ONJECT ORIENTED PROGRAMING C++

TIME : 3 HOUR
MARK : 80

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1 a.What are reference types?The bool type and enumeration data types with examples and describe its usage.

b.What are new and delete expression?Give examples.

c.Define scope of resolution operator with an example and its related use.

2.a.What are inline member functions and recursive functions?Give examples.

b.Define scope and lifetime,global objects and local objects.

c.Discuss the three steps involved in the function over load resolution with an illustration.

3 a.What are the generic functions?Explain how do you overload a function template with an example.

b.Write a program to conduct a generic sort using class template.

4. a.What is static data member and static member functions?What are its merits and demerits?Give examples.

b.Bring out the differences between c++ structure and c++ class.

c.Explain the concept of pointers to objects with an example.

5 a.Discuss with examples constructors and destructors in c++.What is the order of execution?

b.What are the needs and usage of friend functions?Write a program that has overloaded operator to illustrate multiplication of two matrices.

6 a.What are the multiple and multilevel inheritance illustrate with examples?

b.What are virtual functions?Explain with an example its usage?

7.a.write a program that has a class called MATRIX.check the two matrices by using = = overloaded operator.perform the following operations:

```
if(m1==m2)
{
m3=m1+m2
m4=m1-m2
}
```

where m1,m2,m3 and m4 are MATRIX objects.display the result by overload operator <<.

b.Discuss the importance of abstract classes.Give examples.

8.Write critical notes on the following

a.Polymorphism b.Nested classes c.IO streams in c++ d.'this' pointer in c++